

C. The Evolution Of Local Exchange Competition

The NYNEX markets were affected early in the evolutionary process by switched bypass arrangements that the CAPs developed to provide an expanded array of local services in competition with NYNEX. This was originally accomplished through use of a PBX placed at the CAP node (See Attachment 6). The CAPs could route originating traffic directly to the IXC using the CAP's facilities and, using the IXC's switching equipment, directly route terminating calls to an end user's or CAP's PBX using the assigned DID trunk NXX code. Using this type of network configuration, the CAPs at a very early stage began to advertise diverse services in NYC including;

- POP-to-POP access transport
- Large business-to-POP transport
- Private line networks
- Large business disaster recovery
- Facilities management services
- Metropolitan area Centrex like services
- Local area network services
- Local PBX loop services
- Local and regional calling services
- terminating long distance calling
- Public Telephone service

These competing local service networks and serving arrangements have evolved to the point that 18 companies have been certified in New York to compete with NYNEX in the provision of local services. A review of the history of the development of competing networks will be helpful. This will be accomplished using Teleport as an example, as Teleport is the oldest and one of the most successful CAPs in New York City.

Teleport first obtained a Certificate of Public Convenience and Necessity ("CPCN") in New York in 1985. It has been amended many times since. Until recently, when the NYPSC

made it clear that Teleport was certified to provide local exchange services, it provided "local exchange services" under Shared Tenant Service ("STS"), Private Line (CT or PBX extensions) or Reseller CPCN authority. It operated under a very liberal regulatory interpretation of the NYPSC STS rules to the point where, in some cases, Teleport provided virtually all transport and switching, with only dial tone being provided by NYNEX. As an STS provider and reseller, Teleport could provide all forms of telephone services throughout New York State.

The original CPCN authorized TCG to provide and resell interLATA and intraLATA, intercity, and intracity common carrier communications services. Common Carrier Services included Satellite Services, Video/High Speed Data service to interconnect New York City and New Jersey with earth stations in Staten Island, and non-common carrier services such as leasing and maintenance of facilities/equipment. Limitations on Teleport included limiting its intracity services to New York City, and requiring it to refrain from CATV, switched intracity, and connections to residences.

In June of 1986, the Teleport CPCN was amended to allow resale of intracity switched services as "Teleport Tenant Service" at the TCG Staten Island site. Teleport could own, operate and manage a PBX for Shared Tenant Service and provide access to local/toll networks. The issue of inter-tenant service on contiguous or non-contiguous property was deferred.

In January of 1987, the Teleport CPCN was amended to allow inter-tenant calling service at the Staten Island Teleport site for Shared Tenant Services.

In May of 1990, Teleport's CPCN was amended to allow it to provide all forms of

intrastate service (with some limitations on intracity calling). Teleport was authorized to resell all forms of intra-state telephone services, initially only at World Financial and World Trade Center, Shared Tenant Services (CTX, PBX, ISDN), and Public Telephone Services. All inter-tenant calling was provided via NYNEX.

In October of 1991, the NYPSC amended the CPCNs of 18 carriers, including Teleport, to allow them to provide all forms of telecom services, including intracity services. This granted blanket intracity authority throughout the state of New York.

Teleport obtained a further advantage when it obtained a Carrier Identification Code ("CIC") in the first quarter of 1992. Its CIC code, assigned by the North American Numbering Plan Administrator ("NANPA"), provides it with ease of customer dialing, more efficient billing and routing, and tandem connectivity. Use of the CIC provides direct routing of calls to Teleport from any NYNEX central office in the same way that "10288" provides direct routing for AT&T customers.

Finally, in September of 1993, the NYPSC issued an Order clarifying that its October 1991 Order, which had amended the CPCNs of 18 carriers, had conferred LEC status on these carriers, entitling them to NXX assignment and co-carrier status. The certified carriers include: ACC Local Fiber Corp., ACC Network Corp., AT&T, Eastern Message, FiberNet, FiberNet Rochester, Local Area Telecommunications, MCI, Metropolitan Fiber Systems of NY, Metropolitan Fiber Systems of Westchester, MFS Intelenet, New Channels/ Hyperion, Teleport, US Sprint, WilTel, WTG - East, RAT Utilities, TC Systems.

The Order specified:

(1) that NYNEX will make NXX codes available to MFS, Teleport, and other certified

local exchange carriers in a non-discriminatory manner in accordance with the "Central Office Code Assignment Guidelines,"

(2) that NYNEX, MFS and Teleport will define and resolve the physical interconnection requirements in an expeditious manner. They will also agree on compensation arrangements. Both MFS and Teleport must file tariffs for Foreign Exchange Service; these tariffs should discourage wholesale exportation of Manhattan (212 NPA) NXX codes to foreign NPAs. Pending authorization of the tariffs by the commission, these LECs should not export Manhattan telephone numbers to adjoining areas.

These actions relative to the CPCN of Teleport and others have effectively authorized local exchange competition in the State of New York. Indeed, MFS and Teleport portray their services as interchangeable with the local exchange services that NYNEX provides to business users in New York. These competitive services go far beyond the special access bypass that is occurring in other regions.

D. How The CAPs Compete With NYNEX For Local Switched Services.

A few examples of how the CAPs process and rate calls in competition with NYNEX illustrates how the CAPs have taken advantage of favorable regulatory decisions to compete for local exchange service. The CAPs use NYNEX FLEXPATH Digital PBX Service in order to complete calls from their customers to certain NYNEX customers. Calls passed to NYNEX under this service in the NY Metro area (LATA 132) are billed at NYNEX Regional Call Plan (RCP) rates. Attachment 7 provides a summary of the RCP rates. Because the CAPs are not targeting residential customers, the rates shown are those applicable to NYNEX business customers. The following examples refer to the illustration in Attachment 8 and will

facilitate a complete understanding of how a CAP routes and rates local exchange calls on its network to compete with NYNEX.

Example 1

Customer A, served by a CAP, wishes to make a call to Customer 1, a NYNEX customer located in Manhattan. The CAP transports the call over its facilities to its node and hands off the call to NYNEX over the FLEXPATH port. Since the CAP's node is in Manhattan, and the destination of the call is a NYNEX customer in Manhattan, RCP rates would require billing at "Home Region" rates, i.e., 8.0 cents for the first three minutes and 1.3 cents for each additional minute. A five minute call would be billed to the CAP in the amount of 10.6 cents. The CAP would then bill Customer A an appropriate charge for that call.

Example 2

Customer A wishes to make a long distance call. This would involve the use of the customer's long distance carrier. The CAP transports the call over its facilities to its node, and then on to the IXC's POP. This call would not reach NYNEX's network and would produce no revenue for NYNEX.

Example 3

Customer A wishes to call Customer B. The CAP, using its own facilities and switching equipment can also provide that service to its customers independently of NYNEX . Again, NYNEX derives no revenue for the call, since it never enters the NYNEX network.

Example 4

A customer located at a pay telephone wishes to call Customer A. The call is

completed using a pay telephone provided by the CAP, which transports the call over its own facilities, switches the call to Customer A and collects revenue from the calling party.

NYNEX derives no revenue from the call.

Depending on where the call is destined, the CAP can now deliver it to anywhere on its network, to a POP, or to a customer served by NYNEX. Only in the last instance would NYNEX derive revenue for completing the call to its customer.

Example 5

Customer B, also located in Manhattan and served by the CAP, wishes to call a NYNEX customer located in Gnows County, an area outside of the RCP "Home Region". the CAP would transport the call over its own facilities to its node. Upon reaching the node, the CAP would then deliver the call to another of its nodes located as close as possible to the NYNEX central office, where it will pass the call to NYNEX as a terminating Feature Group B ("FGB") call, destined for NYNEX's customer. Using the access rate of approximately 3.9 cents/MOU, a five minute call would cost approximately 19.5 cents. The CAP would then bill its customer an appropriate amount.

In contrast, the same five minute call under the RCP would cost 33.1 cents (14.7 cents for the initial minute and 4.6 cents for each additional minute). The difference between the two rates is 13.6 cents.

FGB billings from the CAP to the interexchange carrier are at a discounted rate. A study shows that Teleport has increased its spending on Feature Group B service by 68% from September 1991 to in May 1993; its Minutes of Use (MOUs) have increased by 55% in the same time period.

Conclusion

The examples above illustrate that the CAPs take advantage of the most attractive rates available. Under the RCP, calls terminating outside of the home region are less expensive if handed off as terminating FGB traffic. Clearly, it is in the best interests of the CAP to keep the call on its own network to the greatest extent possible.

Attachments 9 and 10 illustrate in a comprehensive fashion the impacts on NYNEX revenue flows of the above examples. The charts depict NYNEX services in blue and CAP services in red to demonstrate the effect of competition for switched services. In the "normal" bypass situation, where special access is being used to replace LEC switched access service between a large end user customer premises and an IXC POP (depicted in red on Attachment 9), major portions of the local services revenues are still received by the LEC. Such was the case early in the competitive evolution in the NYNEX region, and this is still the case throughout most of the rest of the nation. As is shown in blue on Attachment 9, revenues associated with Digital PBX and DID/DOD trunks, Centrex and Digital Centrex lines, features and functions, toll and local calls stay with the LEC. There is no terminating Feature Group D bypass and no toll bypass.

However the picture changes when regulators have promoted local switched services competition through liberal interpretations of STS regulations and other pro-competitive public policy decisions. Attachment 10 depicts the bypass experienced by NYNEX where CAPs are offering alternative switched services. Because the NYPSC has given the CAPs NXX codes (controlling entire codes), co-carrier status, loop unbundling etc., major portions of formerly blue areas turn to red. The CAPs now provide end user access lines, T1 lines to

bypass originating Feature Group D, bypass on terminating calls to the NXXs controlled by the CAP, and bypass of intra region toll using Feature Group B. This dramatic change in the revenue picture is unique to NYNEX and demonstrates that NYNEX is ahead of the nation in alternative local switched services competition.

E. Number Retention Plans

Competitors in New York have for some time desired "number portability," which would enable them to compete with NYNEX for existing customers without the necessity of having the customers change their telephone numbers. Although number portability is one of the most difficult and expensive issues to bring to a resolution, competitors are always seeking work-around or interim solutions. Competitors have recently devised a number of plans which are "number retention plans" and which enable them to compete for existing NYNEX customers.

For example, one competitor is attempting to negotiate the current 20 DID number minimum tariff restriction (originally DID carried a 100 number minimum) to a lower requirement of a single number. NYNEX is treating the request as an ONA request and will be filing its service offering in response to the request in the near future. With a one number minimum, a competitor could compete for existing customers in the following manner:

The competitor, acting under an agency agreement with the NYNEX customer, would issue a change of bill party to the NYNEX group handling the customer account (the competitor becomes the customer of record). The competitor then would request that NYNEX disconnect the customers' original line. The competitor then would request that

NYNEX point that telephone number to a NYNEX port under NYNEX's Switched Network Access Ports Service ("SNAPS") tariff, which is then directed to the collocated competitor facilities. This arrangement effectively transfers the customer to the competitor until a longer term solution to portability can be worked out. The customer maintains its current number and the competitor buys the customer an additional directory listing. The competitor uses the NYNEX SNAPS port to interconnect with NYNEX's network, bypassing the NYNEX network, processing calls, and causing revenue losses to NYNEX as described in Section D.

F. The Caps Have Been Able To Achieve Their Stated Requirements For Competition In The NYNEX Region.

Even with the competitive advances which have been made by the CAPs, the evolution of this process as perceived by the CAPs is not complete. Both Teleport and MFS have detailed in letters to NYNEX the conditions they believe are necessary for effective competition. In an October 30, 1991 letter to NYNEX Chairman William Ferguson, Robert C. Atkinson, VP-Regulatory and External Affairs, Teleport, detailed, the Teleport requirements:

**CHANGES THAT TELEPHONE COMPANIES MUST MAKE
TO ENCOURAGE LOCAL EXCHANGE SERVICE COMPETITION**

For local exchange service competition to be operationally, technically and economically feasible at any time in the foreseeable future, local exchange telephone companies must make all of the following available to Teleport Communications and other competitive local exchange service carriers:

1. Cost-based unbundled local loops between a subscriber's premises and the telephone companies' Local Serving Offices;
2. Cost-based central office interconnection arrangements and cost-based connections between the unbundled, cost-based loops and the CO interconnection arrangement;
3. Local telephone number portability so that subscribers can exercise free consumer choice by changing from one local exchange carrier to another

- without sacrificing their existing telephone numbers;
4. Equal access to and equal status in the telephone companies' Signalling System 7 databases and network routing processes (i.e., the telephone companies' traffic routing systems treat Teleport's Class 5 switches no differently from a NYNEX Class 5 end office);
 5. Equal access to and equal status in the telephone companies' Tandem switching and interoffice networks (i.e., the telephone companies' switching systems treat Teleport's Class 5 switches no differently from a NYNEX Class 5 end office);
 6. Integration of competitive local exchange service carriers' Class 5 and Class 4 switches into the NYNEX telephone companies' local traffic routing plan with the integration accomplished through unbundled switching and facility elements at cost-based rates.
 7. Unbundled, cost-based rates for the completion of local telephone calls originated on another local exchange system and delivered to the NYNEX company's Class 5 Local Serving Office or Tandem switch (i.e., a local service "access charge");
 8. Payment by the NYNEX telephone companies to competing local exchange carriers of cost-based rates for the termination of local calls originating on the NYNEX system and terminating on the competitor's system; and,
 9. Cooperative engineering, operational, maintenance and administrative practices and procedures.

Teleport has, since early 1992, been disseminating these 9 conditions by handing out laminated wallet seized cards to industry participants to socialize its position. In the NYNEX region, however, with the combination of state and federal actions, Teleport now can, or soon will be able to, satisfy each of the nine conditions.

1. Local loops in New York have been unbundled into "links" and "ports" since June 1992, when NYNEX responded to a NYPSC order to unbundle PBX and Centrex loops. All remaining local loops were unbundled in January, 1993.
2. NYNEX announced in November, 1990 that physical collocation would be available on an intrastate basis. The Federal tariffs used the NY intrastate expanded interconnection offering as the model for the interstate tariffs. As stated above, loops have already been unbundled in NY and the inter and intrastate expanded interconnection tariffs provide for access to unbundled switched and special access services.
3. Although number portability is probably the most difficult and expensive issue because of data base solutions, the CAPs are devising "work arounds" until the ultimate solution can be reached. For example, as described in the prior section, MFS has recently proposed a "Number Retention Plan" which would take advantage of minimum ordering clauses associated with DID ports from

- the NYNEX SNAPS tariff to allow the end user to change local exchange companies while keeping its existing numbers.
4. Currently, CAPs are resellers and do not have Class 5 offices. At the conclusion of the process of providing NXXs to the CAPs, as ordered by the NYPSC, they become LECs and NYNEX will provide SS7 interconnection in the same manner as provided Independent Telephone companies today.
 5. At the conclusion of the process of providing CAPs with NXXs, as ordered by the NYPSC, the CAPs become LECs they will have access to NYNEX's tandem switching and interoffice network for the exchange of calls between NYNEX end users and CAP end users.
 6. This functionality is accomplished through the switched interconnection tariffs and the NYPSC NXX Order requiring NYNEX to work with MFS and Teleport in the provision of NXXs. The instructions necessary to complete calls will be resident in the Local Exchange Routing Guide.
 7. The NYPSC NXX order also requires NYNEX to come to an agreement on compensation arrangements for the completion of traffic between networks.
 8. The NYPSC NXX order also requires NYNEX to come to an agreement on compensation arrangements for the completion of traffic between networks.
 9. The practices supporting NYNEX's collocation interconnection offerings already provide for cooperative engineering, operational, maintenance and administrative procedures.

Thus, the nine conditions outlined for effective local exchange competition are either in effect or about to be in effect in New York. Indeed, MFS had to ask the Illinois regulatory commission to grant it a certificate and to order Ameritech to provide certain forms of interconnection before it could offer its Intelenet service, which is already in operation in New York. This shows that the evolution of competition in New York is ahead of the rest of the nation.

G. The Success Of Competition.

With their market focus and competitive advantages, the CAPs' businesses have grown at an extremely rapid rate. MFS, founded only six years ago, is now the operator of the largest number of alternative access networks. MFS' total revenue from its

telecommunications and network systems integration businesses has grown from less than \$500,000 in 1989 to over \$100 million in 1992, almost tripling in the last year alone.³

During the short period it has been operating, MFS' total assets have grown to over \$350 million. In addition, MFS' network has grown at an average rate of 74% since 1988 and the number of buildings they serve has increased by 288 % since 1990.

Moreover, the CAPs are not small, undercapitalized companies. For example, MFS is a subsidiary of Peter Kiewit Sons, Inc., a large, diversified real estate development conglomerate. Teleport, the second largest CAP, is owned by two of the nation's largest cable operators, Tele-Communications, Inc. and Cox Cable.

The CAPs have found the NYNEX region a particularly attractive market. A customer survey undertaken last year on behalf of NYNEX revealed that NYNEX's share of the large business market in Manhattan for premise-to-POP DS1 service was approximately 64 percent, while Teleport alone had achieved a 26 percent share.⁴ Competition in other High Capacity Special Access submarkets, such as the POP-to-POP market segment, is even more intense.

In addition to MFS and Teleport, other CAPs that operate in the NYNEX region, such as LOCATE and Fibernet, have also been successful. LOCATE has experienced a 20 percent annual revenue growth rate,⁵ while Fibernet expanded its network by 137 percent last year.⁶

³ MFS Communications Company, Inc., Prospectus dated March 11, 1993 at p. 13 ("Prospectus").

⁴The survey focused on NYT's 200 largest customers.

⁵Connecticut Research, 1992 Alternate Local Transport. . . A Total Industry Report, at p. 20.

In addition, new competitors continue to enter the market. Fivecom has announced plans to offer service in Springfield, Massachusetts while Northeast Networks is planning a network in Westchester County, a suburb of New York City.

One gauge of competition in the New York City metropolitan area can be found in switched access growth rates. There have been significant differences in growth rates for switched access services between central offices ("COs") in New York City and the rest of the state of New York. Between 1988 and 1992, the Broad Street, West Street, West 36th Street, East 37th Street, West 42nd Street and East 56th Street CO's in NYC have witnessed a compound growth rate of - 1.6%, while the rest of Manhattan saw a compound growth rate of + 6.2% and the state as a whole experienced a growth rate of +7.6%. This is a difference of over 9% between those New York City COs and the rest of New York State.

Another view of switched minutes of use (MOU) growth, is a comparison of the growth rate of MOUs for collocated offices versus non-collocated offices in Manhattan, LATA 132, and New York State. The following table displays those growth rates.

	Growth Rate <u>1992 / 1991</u>
Collocated COs	1.26%
Non-Collocated COs in Manhattan	1.94%
LATA 132	2.95%
NYS minus Manhattan	4.93%
NYS minus LATA 132	7.46%
Total NYT	3.79%

This shows that the rural areas of upstate NY are growing at a robust rate of 7.5%,

⁶J.M. Kraushaur, Fiber Deployment Update End of Year 1992, April 1993, Table 14, p. 26.

while collocated offices, which are experiencing the most significant competition, are barely growing at all, and LATA 132 is growing at less than half the rate of the rest of the state.

Clearly, the lower growth rates in Manhattan, particularly in the collocated offices, show that competition has effectively targeted, and obtained, a significant share of the switched access market.

Evidence also suggests that competition is growing in the terminating switched access market. The growth of terminating minutes of use in NYNEX central offices below 59th Street has been approximately 5 % lower than the growth rate in NYNEX central offices in the rest of Manhattan.

Another indication of the success of the competition is the growth rate of the CAPs' circuits in collocated facilities. Since May of 1991, when the NYPSC first permitted interconnection, the CAP DS1 circuits have grown from 0 to almost 1,000 circuits. Between March of 1993 and October of this year, the CAPs increased the number of DS1 circuits in collocated offices by over 175%.

Another view of the success of the competition can be seen by looking at the share of the total switched MOU market that "rides" the NYNEX New York switched network. Attachment 11 was used in the April, 1993 meeting between NYNEX and the Moody's Investor Service Bond Rating Agency. It shows the total switched market as comprised of switched MOUs, special access equivalent MOUs, bypass MOUs and new MOUs. When viewed from this perspective, the share of the total switched access market that uses the NYT switched access facilities is only about 40%.

These results are borne out by a more recent bypass analysis which compared IXC

total minutes to CCL minutes charged by NYNEX for switched access from 1985-1992.

This analysis is contained in Attachment 12 and shows that the NTCs share of the total switched market (defined as NYNEX billed CCLs to IXC billed minutes) is also only about 40%. In addition, it shows that the compound annual growth rate of the "missing" minutes was about 20% per year over that period.

All of the analyses point to the same conclusion; the CAPs have been very successful within the NYNEX region.

H. A Profile Of The Competitors In The NYNEX Region.

H.1 Overview

As we enter the next phase of the evolution of full local exchange competition in the NYNEX jurisdictions, it is clear that competitors are well positioned to compete in all aspects of the NYNEX markets. An overview of the extensive competitor networks serves as a template for the continuation of the evolution. But first it will be useful to review the customer characteristics to understand the motivation for future competitive activity.

Generally, the competitive conditions and customer usage characteristics driving the bypass plans of the competitors and the continued evolution of the competition that NYNEX faces, can be grouped in one of three categories:

(1) High Volume Terminating Usage - End user exchange customers who receive large volumes of incoming interLATA usage. Examples would include mail order and catalogue retailer businesses.

(2) High Volume Aggregator Usage - Any party having large volumes of interLATA

usage either originated by and/or terminated to transient users on exchange service facilities made available on its premises. Examples include colleges, universities, and hospitals.

(3) High Volume End User Usage - Similar to the aggregator situation in that it includes originating and terminating. However, the usage is not attributable to transient users of its premises.

H.2 Competitive Access Providers

In addition to being formidable competitors alone, the CAPs have recently begun to form alliances with cable, cellular and long distance companies, increasing their potential customer base and financial resources, which gives them greater force in competing in the NYNEX region. CAPs can offer lower prices by concentrating on profitable, high volume customers. In order to reduce transport rates, CAPs install fiber facilities in dense market areas by connecting to the local network near LEC central offices.

The CAPs have characterized themselves as niche players to avoid the strict regulatory control that the LECs undergo. After certification in a jurisdiction as a niche player, a CAP will seek to interconnect to the local exchange to become a full service provider. MFS and Teleport are the two major CAPs in the NYNEX region. Teleport and MFS capture 50% of their revenue within the NYNEX region. Teleport alone acquires 72% of its revenue from the NYNEX region.⁷ (See Attachment 3).

i. Metropolitan Fiber Systems

Established in 1988, MFS is the largest CAP. Its current focus is on local service,

⁷Quality Strategies, October 1993, Washington, D.C.

although it recently began offering long distance service. President, Royce Holland boasts that "most of the Bell Operating Companies still lag far behind us in offering modern technology."⁸ MFS has concentrated on supplying special access to businesses, governments, and non-profit organizations within a city.

Exhibiting its financial strength, MFS filed data in March of this year with the Security Exchange Commission in preparation for a public offering of 8.5 million equity shares in the company. From 1988-1992, MFS grew over 100% in revenue per year (630% average), with 128% per year growth in circuits from 1990 to 1992 (589,130 total) and 90% growth in fiber miles (38,595). MFS has also been certified as a LEC by the New York Public Service Commission.

As indicated earlier, MFS is an example of a CAP that has grown at an extremely rapid rate. MFS, founded only six years ago, is now the operator of the largest number of alternative access networks. MFS's total revenue from its telecommunications and network systems integration businesses has grown from less than \$500,000 in 1989 to over \$100 million in 1992, almost tripling in the last year alone.⁹ During the short period it has been operating, MFS's total assets have grown to over \$350 million.¹⁰ In addition, MFS's network has grown at an average rate of 74 percent per year since 1988, and the number of buildings

⁸Kirchhoff, Herb, Local Competition and Regulation: Competitive Access Providers, Telecom Publishing Group, Alexandria, VA, p. 47.

⁹MFS Communications Company, Inc., Prospectus dated March 11, 1993 at p. 13 ("Prospectus").

¹⁰Ibid.

they serve has increased by 288 percent since 1990.¹¹ MFS was given permission in 1990 to construct a bypass network in New York City. Completed in February 1991, it extends 7588.5 fiber miles, 64.6 route miles and targets 283 buildings. MFS is currently expanding its network to include Brooklyn, Queens and the Bronx, and it plans to provide services to major hospitals and universities.

In Boston, MFS Telecom and McCourt Cable systems formed a joint venture and began operations in December 1987 and was granted certification to provide intrastate services in Massachusetts. MFS/McCourt serves Boston's financial district, passing under approximately 13 streets. Its network consists of 17.2 route miles and 2363.6 fiber miles, targeting approximately 121 buildings.

In December 1992, MFS acquired Boston Fiber Optic Company ("BFOC") giving it a 10-mile network that connects downtown Boston, Cambridge, Back Bay and Beacon Hill. In addition to BFOC, MFS began plans in 1st quarter 1993 to expand its network approximately 90 miles. The acquisition and expansion will add 72 route miles to MFS/McCourt's diverse network. The 90-mile network will offer access to voice and data services to businesses and organizations in 350 buildings along the route.

The FCC's recent interconnection order allows MFS to access several New England central offices giving MFS additional capability to serve many small and medium businesses.

Just recently MFS signed a Letter of Agreement to buy the Fibernet, Inc. fiber networks in Buffalo, Albany and Rochester.

¹¹J.M. Kraushaur, Fiber Deployment Update End of Year 1992, April 1993, Table 14, p. 26.

MFS has made it clear that it intends to make the NYNEX region one of its principal areas of focus.

In the largest single market, New York City, however, CAPs have been authorized to provide essentially all of the local exchange telecommunications services. As a result, the Company has recently announced its intention to provide, through MFS Intelenet, a facilities-based single source for telecommunications services to small and medium sized businesses in New York City, utilizing the Company's existing network.¹²

MFS' subsidiary, MFS Intelenet, will focus on switched services. MFS Intelenet has received approval from the NYPSC to provide switched and non-switched services on a resale and direct provisioning basis. Their metro area switch is located at a site in Jersey City. The switch is an Ericson AXE with two remotes in Manhattan, one at 121 West 45th St. and the other at 33 Whitehall St. The switch will act as both an end office switch and as a tandem switch.

According to MFS, "MFS Intelenet is the nation's only full service telecommunications company designed exclusively to meet the needs of small to medium sized businesses (5-40 lines) by providing local and long distance service over state-of-the-art facilities."¹³ MFS Intelenet offers both local and long distance service through one carrier, giving the customer a single source for all of its telecommunications needs. MFS' pricing flexibility gives it the ability to compete with NYNEX's local exchange. "MFS Intelenet prides itself on being more

¹²Id. at p. 31.

¹³MFS Communications Company, Inc. "News Release," "MFS Intelenet, Inc. Q & A," October 5, 1993, NY. See Attachment D.2.

responsive to customer needs by providing superior service at a lower cost."¹⁴ MFS can offer ubiquitous service through the facilities of MFS Telecom or through interconnection with NYNEX. MFS boasts of a 41% savings over NYNEX's local calling rates.¹⁵ MFS claims its network coverage area in Manhattan essentially reaches the entire island (See Attachment 13).

MFS has many customers, including the three major long distance carriers, AT&T, MCI and Sprint, as well as large telecommunications customers such as Bear Stearns, the American Stock Exchange, Quotron Systems, CNN, General Electric and NASA.

MFS Datanet offers advanced ATM switched data service over its fiber optic network loops and it is interconnected to four other MFS cities by WilTel's interstate fiber network. The MFS ATM switch is located at 33 Whitehall St. MFS plans to connect all 14 of its city networks in 1984.

ii. Teleport Communications

Teleport Communications (Teleport), which was incorporated in 1983, began construction of its New York City network in January of 1984, and was in operation by July 1985. Teleport is now jointly owned by four of the largest U.S. cable operators, TCI, Cox, Comcast and Continental (all having interests in telephone services with ownership in telecommunications or actual operation of CAP networks). Teleport's business has been growing at a rapid rate. Its network has grown at an average rate of 110 percent per year

¹⁴Ibid.

¹⁵News Release, MFS Communications Company, Inc., October 5, 1993.

since 1988.¹⁶ Teleport accounts for approximately "half of all CAP-industry revenues . . . \$65 million of the CAP industry's total \$138 million in revenues. . . \$11 million revenues of DFW Metrolink, which Teleport acquired last year [1991], brings the Teleport companies' share of the 1991 CAP revenues to about 55%,"¹⁷ revenues for 1992 were estimated at \$57 million.

Teleport's New York network extends west of New York City and south into 12 cities and towns in northern and central New Jersey. The network also extends east and north into NY state, including White Plains, Garden City and Hauppauge. Teleport's Boston network serves customers in over 50 buildings in Cambridge, Newton, Waltham and Weston.

Teleport's network in New York is estimated to be over 325 miles long, connecting Manhattan's business district to Brooklyn, Queens, Staten Island and extending to Jersey City, Newark, New Brunswick and Princeton, New Jersey. In 1990 Teleport extended its fiber optic network 10 miles to provide access services to Long Island; industry sources project that Teleport will expand beyond the current Garden City boundary.¹⁸

Teleport provides the equivalent of more than 377,000 voice-grade telephone circuits; approximately 70 percent of its traffic is carrier-to-carrier transmission services; 20 percent is customer premises-to-customer premises traffic, and ten percent is customer premises-to-carrier traffic.

In 1989, Teleport enhanced its New York network by directly connecting to NYNEX's

¹⁶J.M. Kraushaur, Fiber Deployment Update End of Year 1992, April 1993, Table 14, p. 26.

¹⁷Kirchhoff, p. 42.

¹⁸1993 Faulkner Information Services

central office switches. In 1990 it was allowed to interconnect to six NYNEX central offices to provide private line services anywhere within New York City.

TC Systems, a Teleport subsidiary, participated in a trial in early 1991 to deliver ISDN to the New York public network. TC Systems of New York, as of April 1992, supplied 27,000 telephone lines and handled more than 400,000 calls per day.

Teleport connects its switches with NYNEX's network using NYNEX's Flexpath Digital PBX service. This service provides Teleport with the economies and efficiencies of digital voice connections for direct inward dialing (DID) and direct outward dialing (DOD). Telephone numbers needed for the DID service are obtained from NYNEX at tariffed rates. As of August 1993, in New York, Teleport had 50,000 DID numbers located at W. 50th Street, Broad Street, Jamaica and Nassau. Looking at only two of the CAPs in New York City, MFS and Teleport have a total of 70,000 DID lines.

As a marketing strategy to compete with local telephone companies, Teleport stresses route diversity, service quality, vendor diversity, strategic security and lower price. Teleport seeks out heavy users in market niches that afford high profits. The company specializes in high-volume, telecommunications-dependent business users such as IXC's, government agencies and financial service companies.

Teleport has been forming many alliances. Alliances formed by Teleport Communications Group (TCG) as part of the trend towards cable and CAP alliances include: agreements with Cablevision Industries; Adelphia Communications Corporation's Hyperion Telecommunications; Times Mirror Co. and Viacom International Inc.

In 1992, Teleport competed against NYNEX and won a six-year, \$6.5 million contract

with the Port Authorities of New York and New Jersey to provide public pay telephone service at the transportation agency's metropolitan locales. This service was provided in the past through NYNEX contract. Teleport will provide 3,000 public pay phones to Port Authority of New York and New Jersey locations including the three metropolitan area airports, the World Trade Center and two bus terminals. Teleport will provide a full turnkey system for Port Authority's pay phones. Local switching will be done by NYNEX, and the Port Authority will designate a long-distance carrier for presubscribed lines.

Collocation has allowed Teleport to expand its network configuration even farther. By collocating in key central offices, Teleport is positioned to aggressively market new service offerings. Teleport is currently collocated in 12 central offices in New York City and Long Island.

Teleport officials indicate that Teleport serves more than 500 customer locations in nearly 300 buildings, and its accounts include virtually all major interexchange companies. As of April 1993, Teleport's customer list included: ALC Corp, AT&T, Bankers Trust, Bear Stearns, Cable & Wireless Communications, Citibank, Dow Jones, First Boston, Kidder Peabody, MCI, Merrill Lynch, Metromedia, Prudential Bache Securities, Securities Industry Automation Corp, Sprint, WilTel and Womura Securities International.

iii. Other Successful CAPs

In addition to MFS and Teleport, other CAPs that operate in the NYNEX region, such as LOCATE and Fibernet, have also been successful. Locate has accomplished a 20 percent

annual revenue growth rate,¹⁹ while Fibernet expanded its network by 137 percent last year.²⁰ New competitors are continuously entering the market. For example, Fivecom announced plans to offer service in Springfield, MA, Northeast Networks is planning a network in a suburb of New York City, Westchester County, and Newchannels/Hyperion is entering Burlington, VT and some cities in NY state.

New Channels/Hyperion is owned equally by New Channels Corporation and Adelphia Communications Corporation, which respectively operate cables systems in Onondaga County and the city of Syracuse. In May of 1992, New Channels/Hyperion filed for a Certificate of Public Convenience and Necessity to provide interlude, intralata and intracity telecommunications facilities. Fiber optic facilities will initially be leased from parent corporations to New Channels/Hyperion and new facilities will be constructed as needed.

Private line services will be offered to educational, institutional and commercial customers which have two or more locations (premise-to-premise) or require direct connection to an IXC POP. New Channels/Hyperion's petition did not, however, indicate that services will be offered for POP-to-POP connections.

Hyperion is also planning a statewide fiber network for the state of Vermont. Hyperion plans to offer services on an individual case basis for POP-to-POP service for interstate traffic, central office-to-POP links for interstate traffic, customer premises to POP links for interstate traffic and customer premises-to-premises service. In the long-term, this

¹⁹Connecticut Research, 1992 Alternate Local Transport. . . A Total Industry Report, p. 20.

²⁰J.M. Kraushaur, Fiber Deployment Update End of Year 1992, April 1993, Table 14, p. 26.

multi-million dollar project opens the door for Adelphia to offer services such as Personal Communications Systems (PCS), interactivity and other two-way deliveries.

H.3. Cable Service Providers

The biggest advantage that cable companies have is their far-reaching presence, encompassing 80% of NYNEX's customers. The NYNEX region has approximately 10.7 million television households; 68-70%, or 7.4 million households, subscribe to cable. With cable companies entering partnerships with CAPs, there is the potential to provide an extensive network. Cable companies are creating separate subsidiaries with an intention to compete with the LECs for local service, and to grow in the entertainment industry.

There is a natural synergy between CAPs and the cable industry. Cable operations generally serve residences, while CAPs primarily serve businesses. The September 17, 1992 FCC expanded interconnection decision increased the potential for cable entry into local access and transport business. Cable's entry into the telephone business in direct competition with the LECs promotes the network of networks concept. AT&T alliances with cable support a broad range of telecommunications services. Examples of these alliances are Cablevision/AT&T at LIU; McCaw/AT&T; AT&T/NCR and many others.

Cablevision is building a fiber optic-based network that could deliver video-on-demand, interactive games and an alternative phone service to subscribers on Long Island and in New York City. The current backbone of the system is 500 miles of sheathed fiber. Earlier this year, Cablevision unveiled plans to spend \$300 million to roll out the nation's largest electronic highway -- 3,000 miles of high capacity fiber in the New York metropolitan